Electrical Specifications

Input

Input Voltage (VAC)	120-277 (+/- 10%)	
Frequency Range (Hz)	50–60 (+/- 10%)	
	120V	**277V**
Input Current (A)	0.21	0.09
THD @ Full load	<20%	<20%
Power Factor @ Full load	>0.9	>0.9
Efficiency @ Full load	≥84%	≥83%
Inrush Current (Apk)[1]	5.2	10.0
Line Regulation @ Full load	<5%	<5%

[1] Complies to NEMA 410 inrush current requirements

General Information

Item Number	*28437A F-type
	*284378 J-type
Type	Constant Current
Output Power	20W (Max.)
Programming Tool	*274A17 Required
	*2743V2 Optional
Software	OT Programmer
Programmable Features	Output current
	Minimum dimming level
	Dim to Off

Output

Output Current (mA)[1]	250-500mA
Default Current (mA)	300mA
Output Voltage (VDC)	26-42VDC
Output Ripple Current	<30% (<1kHz)
Max. Output Power (W)	20W
LED Power-Up Time	<0.5sec
Load Regulation	<3%
Over Voltage Protection	Yes, non-latching
Over Load Protection	Yes, non-latching
Output Short-Circuit Protection	Yes, non-latching
Over Temperature Protection	Power Foldback at 95ºC

[1] Programmable with 1mA resolution with +/- 5% accuracy or +/- 5mA below 100 mA programmed current

Environmental Specifications

Ambient Operating Temperature	-30ºC to 50ºC
Case Temperature (Tc)	80ºC (50k hrs)[1]
	90°C (Max.)
Max. Storage Temp.	75ºC
Max. Relative Humidity (%)	85% non-condensing
Transient Protection	ANSI C82.77 Low Bay 2.5kV
UL Rating	Dry & Damp
UL File number	E333135
IP Rating	IP20
EMI Compliance	FCC Part 15 Class A
	FCC Part 15 Class B @120VAC
Sound Rating	Class A

[1] 5 year warranty applicable at 80ºC

Dimming

Dimming Control	0 – 10V & Phase-cut
Dimming Range	1-100% (0-10V)
	1-100% (Phase-cut, 120VAC)
Dimming Type	Current Reduction
Dimming Input Isolation	2.5kV
Source/Sink Current	0.22mA max
Dim-to-Off OFF/ON	0.6V / 1V

CAUTION: More than one power supply present. For Phase-cut, 120VAC, Refer compatibility charts for further guidance.

OPTOTRONIC® OT20 Dual Dim-1 - Technical Specifications

Ordering Information

Item Number	Ordering Abbreviation	Total Output Power (W)	Output Current Range (mA)	Default Current Setting (mA)	Output Voltage Range (VDC)	Dimming Control	Housing Type
*28437A	OT 20W UNV 0A5 DUALDIM DIM-1 F-HOUSING J25	20	250-500	300	26-42	0-10V / Phase Cut	F-Type
*284378	OT 20W UNV 0A5 DUALDIM DIM-1 J-HOUSING J25	20	250-500	300	26-42	0-10V / Phase Cut	J-Type

Wiring Diagram
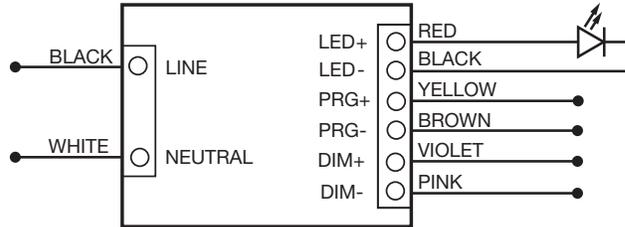
Notes:
- Maximum suggested remote mounting distance is 16 feet.
- Input (L/N) and LED Output wire leads are two core ANSI/UL1015/AWG18, temperature 105°C copper wire.
  – Cable Length: 150mm, stripped and tinned (10mm)
- DIM and PRG wire leads are two core ANSI/UL1015/AWG22, temperature 105°C copper wire.
  – Cable Length: 170mm, stripped and tinned (10mm)
- OT Outdoor Programming Tool *2743V2 can be used for PRG connection (for drivers with flying leads).
- Driver case must be grounded.

Key Application Notes

OT20 Dual Dim is compatible with both 0-10V dimming controllers and Phase Cut dimmers including:
- Electronic Low Voltage (ELV) / Reverse Phase / Trailing Edge Dimming
- TRIAC / Forward Phase / Leading Edge Dimming
- Phase Cut dimming is only available when Input Voltage is 120VAC

Mechanical Diagrams

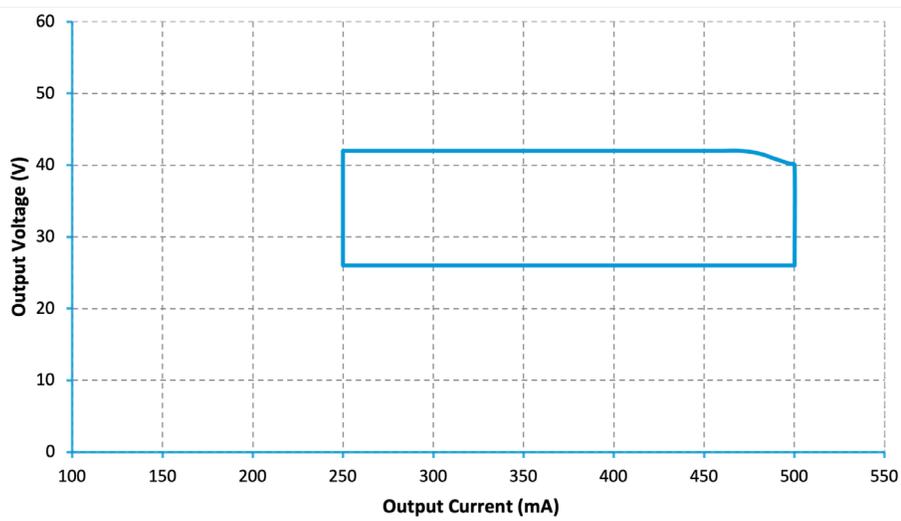**F-Style (side-feed) Housing**
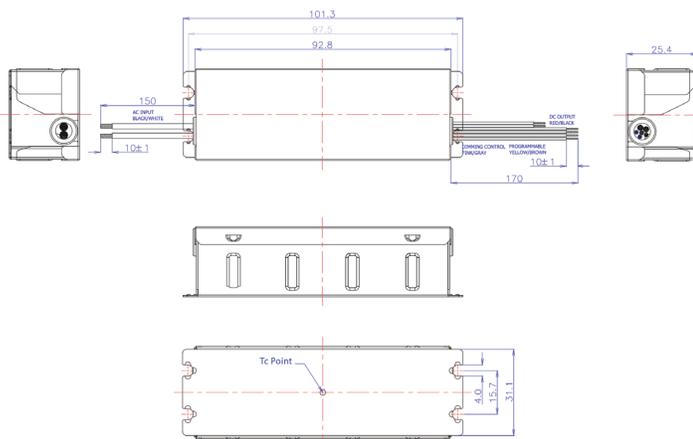
J-Style (bottom-feed) Housing
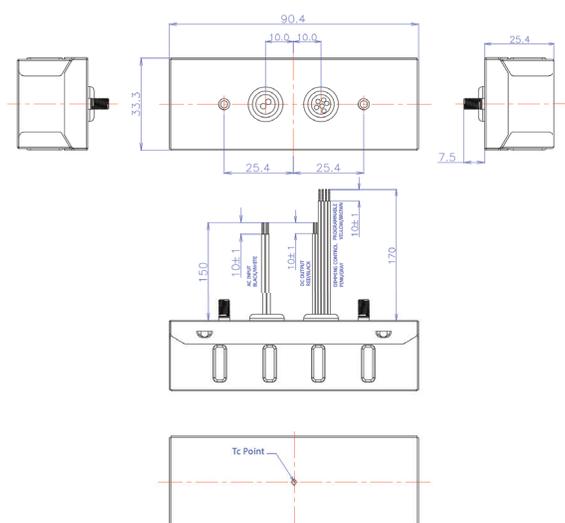
Mechanical Specifications

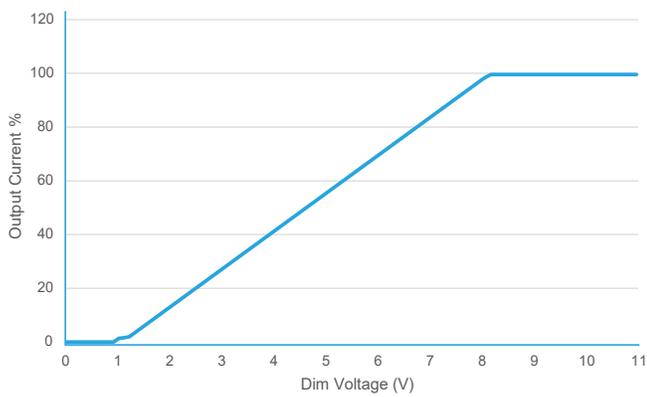| Housing	F-Style	J-Style
Length	3.98" (101.3mm)	3.56" (90.4mm)
Width	1.22" (31.1mm)	1.31" (33.3mm)
Height	1.0" (25.4mm)	1.0" (25.4mm)

OPTOTRONIC® OT20 Dual Dim-1 - Technical Specifications
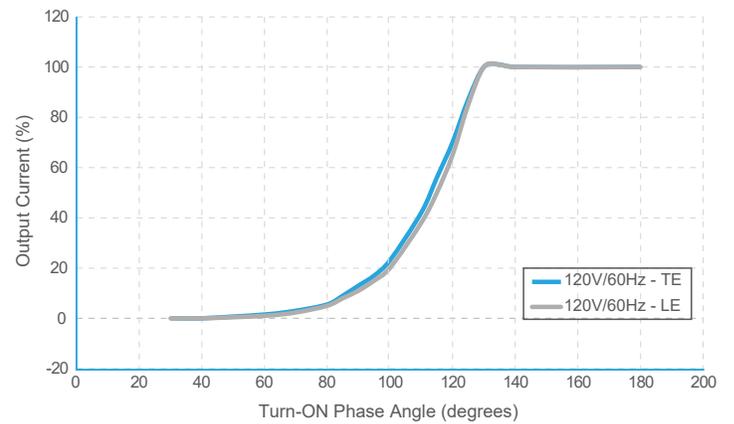
Operating Range

Dimming Curves
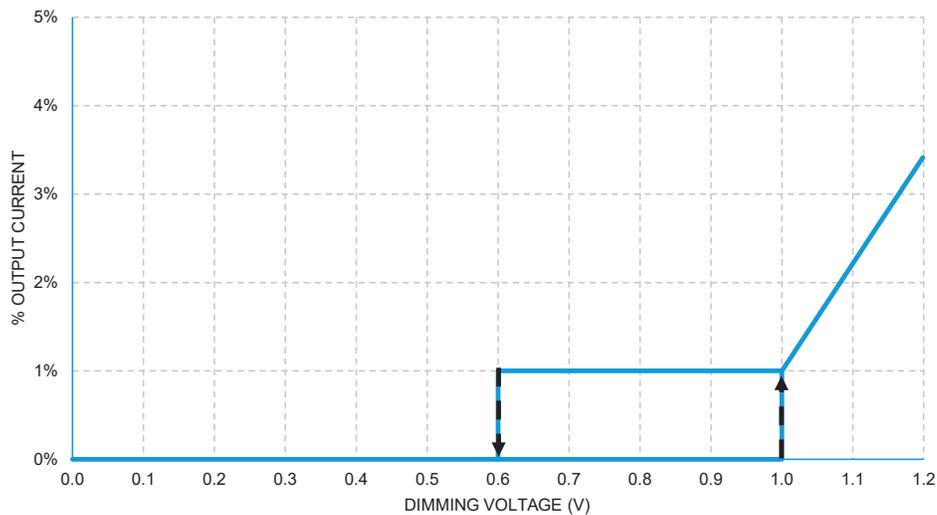
0-10V Dimming

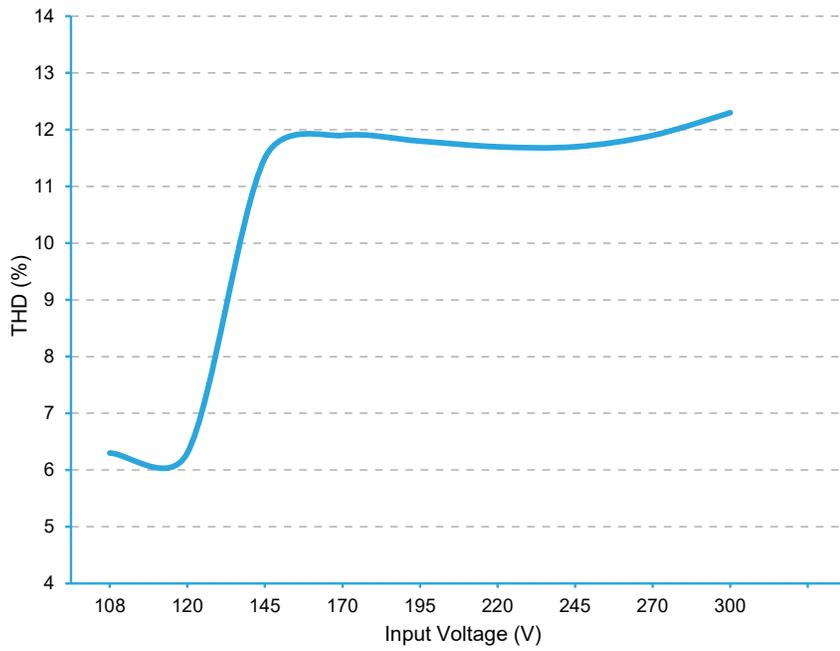### Typical dimming vs Turn-ON phase angle of AC input

Note: Operating the driver below the minimum Turn-On Phase Angle can result in driver output turning off or unstable performance.
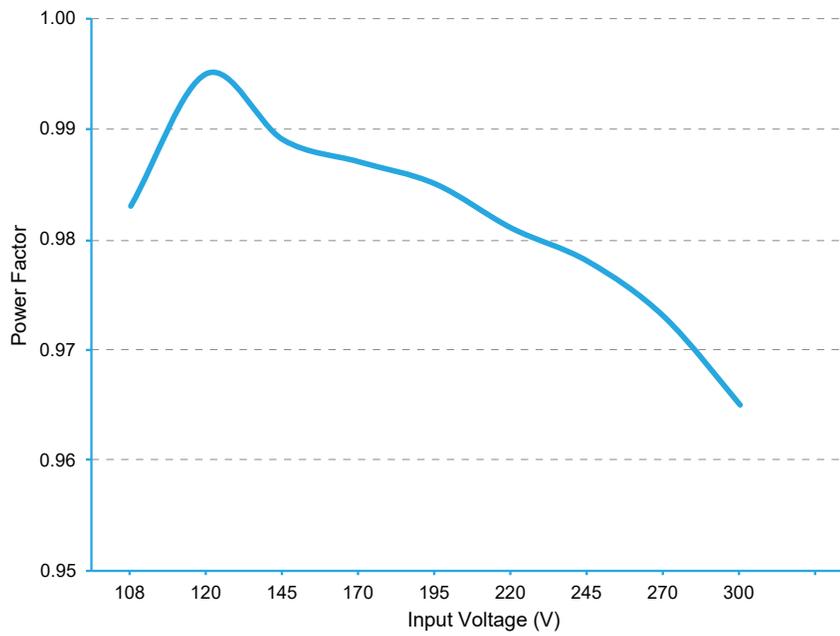
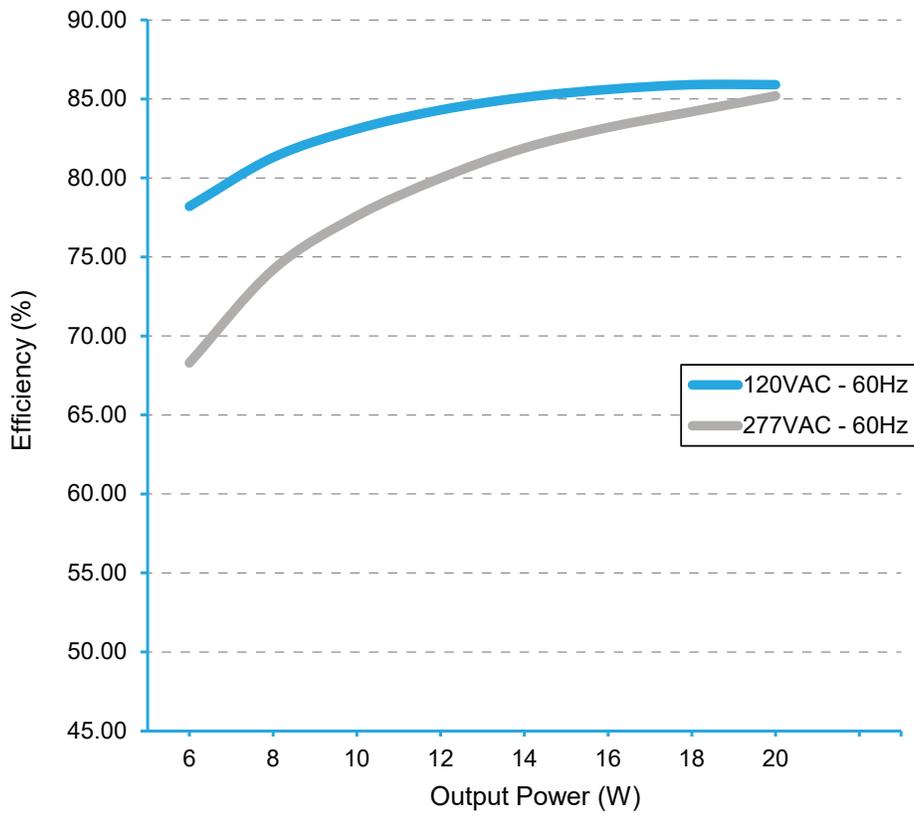### Dim-to-Off Hysteresis

THD vs. Input Voltage (Full Load)
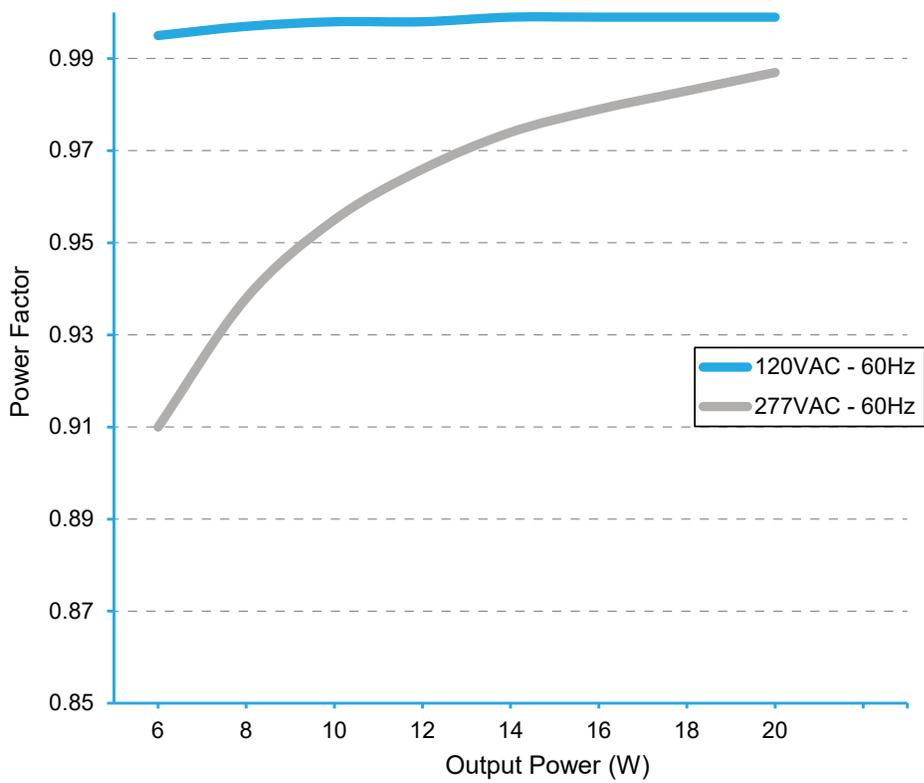

Power Factor vs. Input Voltage (Full Load)
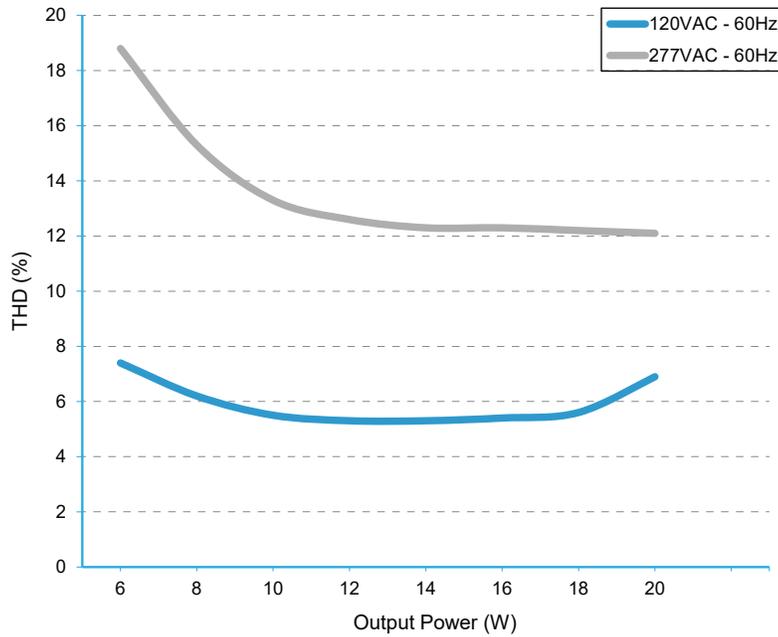
Efficiency vs. Output Power

Power Factor vs Output Power

OPTOTRONIC® OT20 Dual Dim-1 - Technical Specifications

THD vs Output Power

Inrush Characteristic

Vin (V)	Ipeak (A)	T (@10% of Ipeak)
120	5.2	235 µs
277	10.0	292 µs

Complies to NEMA 410 inrush current requirements

Dimmer/Sensor Compatibility

| Manufacturer	Model	Type
LUTRON	DVCL-153P	Leading Edge (Forward Phase)/ TRIAC
LUTRON	MACL-153M	Leading Edge (Forward Phase)/ TRIAC
LUTRON	DVELV-300P	Trailing Edge (Reverse Phase)
LUTRON	MAELV-600	Trailing Edge (Reverse Phase)
LUTRON	TGCL-153PH	Leading Edge (Forward Phase)/ TRIAC
LEVITON	6672	Leading Edge (Forward Phase)/ TRIAC
LUTRON	PD-6WCL	Leading Edge (Forward Phase)/ TRIAC
LEVITON	6674	Leading Edge (Forward Phase)/ TRIAC
LUTORN	SELV-300P	Trailing Edge (Reverse Phase)
LUTRON	SCL-153P	Leading Edge (Forward Phase)/ TRIAC
LUTRON	CTCL-153P	Leading Edge (Forward Phase)/ TRIAC
LEVITON	IPL06	Leading Edge (Forward Phase)/ TRIAC
LEVITON	TSL06	Leading Edge (Forward Phase)/ TRIAC
LEVITON	D26HD	Leading Edge (Forward Phase)/ TRIAC
LEVITON	RNL06	Leading Edge (Forward Phase)/ TRIAC

Notes:
- Trailing Edge dimmers often have adjustable conduction phase-angles. Fine tuning of the phase-angle may be required to ensure minimum dimming performance and/or stable output.
- Compatibility testing must be performed in a representative application.
- The absence of a dimmer from this chart does not imply incompatibility.
- Driver may turn off if the phase angle drops below the minimum turn-on phase angle of 40° and 60° for leading edge and trailing edge dimmers, respectively.

Lifetime vs Case Temperature
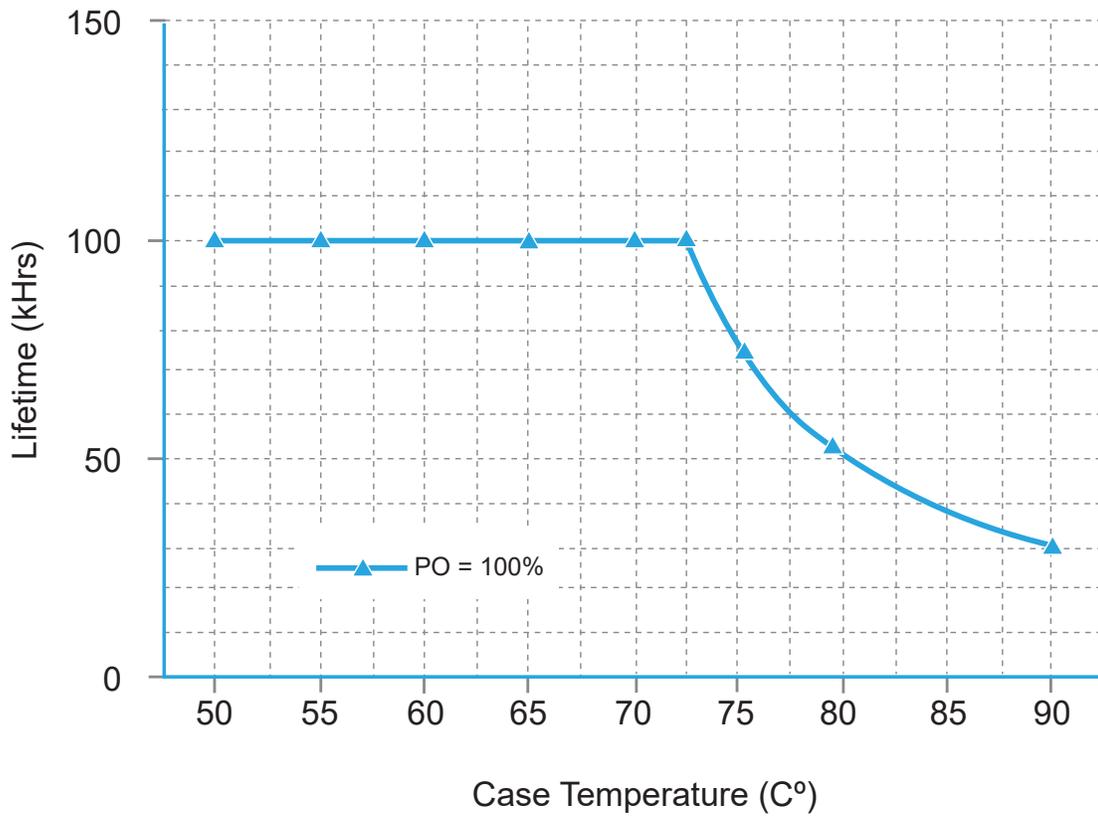
Warranty

OPTOTRONIC® by eldoLED are covered by a 5-year limited warranty.
Complete warranty terms can be found at: www.eldoled.com/legal/terms-and-conditions

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